IN THE CLAIMS:

Kindly replace the claims with the following:

1. (Original) A method for dynamically selecting a communication channel between an access point (AP) and a plurality of stations (STAs) located within the coverage area of a basic service set (BSS) in a wireless local area network (WLAN), the method comprising the steps of:

(a) determining whether a new channel to be used by said plurality of stations is needed;

(b) requesting, by said AP, a channel signal quality measure to at least one of said plurality of stations;

(c) reporting a channel signal quality report to said AP based on a received signal strength indication (RSSI) and a packet error rate (PER) of all channels measured by said plurality of stations;

(d) determining a plurality of candidate channels for use in communication between said AP and said plurality of stations; and,

(e) selecting one of said candidate channels based on said channel quality report for use in communication between said AP and said plurality of stations.

2. (Original) The method of claim 1, further comprising the step of transmitting the selected channel information to said plurality of stations by said AP.

3. (Original) The method of claim 1, further comprising the step of establishing communication to said selected channel between said AP and said plurality of stations.

4. (Original) The method of claim 1, wherein said channel signal quality report further includes an interference signal level caused by another communication device, said interference signal level is based on the absence of any 802.11 frame reception.

5. (Original) The method of claim 1, wherein said RSSI and said PER is used to determine said channel signal quality and a relative distance between the STA requested for said channel signal quality measure and a plurality of adjacent stations from said adjacent BSS.

6. (Original) The method of claim 1, wherein it is determined that said new channel is needed in step (a) if one of the following conditions occurs:
(1) said BSS is formed by said AP;
(2) said AP or said STA experiences a bad channel condition;
(3) said BSS overlaps with an adjacent BSS; and,
(4) no association of said STA by said AP occurs longer than a predetermined time period.

7. (Original) A method for dynamically selecting a communication channel between an access point (AP) and a plurality of stations (STAs) located within the coverage area of a basic service set (BSS) in a wireless local area network (WLAN), the method comprising the steps of:
(a) determining whether a new channel to be used by said plurality of wireless stations is needed;
(b) requesting, by said AP, a channel signal quality measure to at least one of said plurality of stations;
(c) scanning a set of channels available for use by said plurality of stations to determine whether a signal from an adjacent BSS is received;
(d) if said adjacent BSS signal is detected, determining a signal quality measure of each channel of said set of channels based on a received signal strength indication (RSSI) and

a packet error rate (PER) of all said channels measured by said plurality of stations to said AP; and,

(e) selecting said new channel based on said measured RSSI and said PER information.

8. (Original) The method of claim 7, further comprising the step of communicating information about said new channel from said AP to said plurality of stations.

9. (Original) The method of claim 7, further comprising the step of establishing communication to said new channel between said AP and said plurality of stations.

10. (Original) The method of claim 7, wherein said channel signal quality report further includes an interference signal level caused by another communication device, said interference signal level is based on the absence of any 802.11 frame reception.

11. (Original) The method of claim 7, wherein said RSSI and said PER is used to determine said channel signal quality and a relative distance between the STA requested for said channel signal quality measure and a plurality of adjacent stations from said adjacent BSS.

12. (Original) The method of claim 7, further comprising the steps of: detecting a channel signal quality from the set of said channels by said AP; determining a candidate channel for use in communication between said AP and said plurality of stations; and, switching to said candidate channel if the detected channel signal quality exceeds a predetermined threshold.

13. (Original) The method of claim 12, wherein said AP measures said channel signal quality during a contention-free-period (CFP).

14. (Original) The method of claim 12, wherein said AP measures said channel signal quality after transmitting request-to-send (RTS) frame.

15. (Original) The method of claim 7, wherein it is determined that said new channel is needed in step (a) if one of the following conditions occurs:
(1) said BSS is formed by said AP;
(2) said AP or said STA experiences a bad channel condition;
(3) said BSS overlaps with an adjacent BSS; and,
(4) no association of said STA by said AP occurs longer than a predetermined time period.

16. (Original) A method for dynamically selecting a communication channel between an access point (AP) and a plurality of stations (STAs) located within the coverage area of a basic service set (BSS) in a wireless local area network (WLAN), the method comprising the steps of:
(a) determining whether a new channel to be used by said plurality of wireless stations is needed;
(b) requesting, by said AP, a channel signal quality measure to each of said plurality of stations;
(c) scanning a set of channels available for use by said plurality of stations to determine whether a signal from an adjacent BSS is received; and,

(c)(i) if detected, measuring a received signal strength indication (RSSI) and a packet error rate (PER) of all said channels scanned by said plurality of stations to said AP;

(c)(ii) if not detected, measuring an interference level caused by another communication system based on the absence of any 802.11 frame reception for a predetermined time period; and,

(d) selecting said new channel representing the least interference signal level based on said measured RSSI, PER, and interference level.

17. (Original) The method of claim 16, further comprising the step of communicating information about said new channel from said AP to said plurality of stations.

18. (Original) The method of claim 16, further comprising the step of establishing communication to said new channel between said AP and said plurality of stations.

19. (Original) The method of claim 16, further comprising the steps of:

detecting a channel signal quality from the set of said channels by said AP;

determining a candidate channel for use in communication between said AP and said plurality of stations; and,

switching to said candidate channel if the detected channel signal quality exceeds a predetermined threshold.

20. (Original) The method of claim 19, wherein said AP measures said channel signal quality during a contention-free-period (CFP).

21. (Original) The method of claim 19, wherein said AP measures said channel signal quality after transmitting request-to-send (RTS) frame.

22. (Original) The method of claim 19, wherein determining that said new channel is needed in step (a) if one of the following condition occurs:
(1) said BSS is formed by said AP;
(2) said AP or said STA experiences a bad channel condition;
(3) said BSS overlaps with an adjacent BSS; and,
(4) no association of said STA by said AP occurs longer than a predetermined time period.

23. (Original) A system for dynamically selecting a communication channel between an access point (AP) and a plurality of stations (STAs) located within the coverage area of a basic service set (BSS) in a wireless local area network (WLAN), the system comprising:
means for determining whether a new channel to be used by said plurality of stations is needed;
means for requesting, by said AP, a channel signal quality measure to at least one of said plurality of stations;
means for reporting a channel signal quality report to said AP based on a received signal strength indication (RSSI) and a packet error rate (PER) of all channels measured by said plurality of stations; means for determining a plurality of candidate channels for use in communication between said AP and said plurality of stations; and,
means for selecting one of said candidate channels based on said channel quality report for use in communication between said AP and said plurality of stations.

24. (Original) The system of claim 23, further comprising means for transmitting the selected channel information to said plurality of stations by said AP.

25. (Original) The system of claim 23, further comprising means for establishing communication to said selected channel between said AP and said plurality of stations.

26. (Original) The system of claim 23, wherein said channel signal quality report further includes an interference signal level caused by another communication device, said interference signal level is based on the absence of any 802.11 frame reception.

27. (Original) The system of claim 23, wherein said RSSI and said PER is used to determine said channel signal quality and a relative distance between the STA requested for said channel signal quality measure and a plurality of adjacent stations from said adjacent BSS.